

REMARKS

The Examiner is thanked for the due consideration given the application. Claims 30-60 are pending in the application. No new matter is believed to be added to the application by this response.

Election/Restriction

The Official Actions has restricted the claims of the invention into the following groups:

Group I, claim(s) 30-33 (in part), drawn to a process for the preparation of a cyclodextrin derivative which does not comprise a biorecognition element;

Group II, claim(s) 30-33 (in part), drawn to a process for the preparation of a cyclodextrin derivative comprising a biorecognition element;

Group III, claim(s) 34-45 (in part) and 52-60 (in part), drawn to a cyclodextrin derivative which does not comprise a biorecognition element, or an inclusion complex thereof, or pharmaceutical composition comprising the same; and

Group IV, claim(s) 34-45 (in part), 46-51 and 52-60 (in part), drawn to a cyclodextrin derivative comprising a biorecognition element, or an inclusion complex thereof, or pharmaceutical composition comprising the same.

Group IV, claim(s) 34-45 (in part), 46-51 and 52-60 (in part), is elected with traverse.

The invention is related to a cyclodextrin derivative comprising a biorecognition element, or an inclusion complex thereof, or a pharmaceutical composition comprising the same.

The Official Action asserts that the technical feature linking the invention divided into Groups I-IV does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art. By this, the Official Action has acknowledged that the prior art has been considered.

The Official Action considers NAGATA et al. (Bull. Chem. Soc. Jpn., 67, 495-499 (1994)), which describes a compound, the formula of which is analogized to formula (I) of the present invention. The Official Action asserts that this technical feature does not define a contribution over the prior art and does not constitute a special technical feature.

NAGATA et al. describes the compound mono-6-(2-aminoethylthio)- β -cyclodextrin. NAGATA et al. was cited in the preliminary search report of the French application, which is the priority document of the present application. As a result, a disclaimer was voluntarily added to the compound claims.

However, the process of preparation of this compound described by NAGATA et al. is different from the process of the present invention. This compound was prepared by reaction of the 6-*O*-tosylcyclomaltoheptaose in DMF with cysteamine at ambient

temperature. NAGATA et al. fails to specify the yield of this reaction

However, in a quite similar work, B. EKBERG et al. (*Carbohydr. Res.*, **1992**, 192, 111-117) reported a yield, of 4.3% for the preparation of 6-*O*-tosylcyclomaltoheptaose from cyclomaltoheptaose, followed by a yield of 4.3% for the preparation of the 6-(2-aminoethylthio)cyclomaltoheptaose derivative from the *O*-tosyl precursor in a water/DMF mixture at 60°C in the presence of ammonium hydrogen carbonate.

In the present invention, compounds according to the formula (I) are obtained by reaction of a C-6 halogenated cyclodextrin precursor with cysteamine hydrochloride in DMF in the presence of triethylamine at room temperature, with a yield of 86%, which is double of the reported yield to synthesize this specific compound.

Furthermore 6-halogenated cyclodextrin precursors are obtained:

- either from cyclomaltoheptaose with yields around 80-95% according to J. Defaye and et al. the corresponding cyclodextrin (see *Supramol. Chem.*, 2000, 12, pp. 221-224, *Polish J. Chem.* 1999, 73. pp. 967-971, *Tetrahedron Lett.* 1997, 38, pp. 7365-7368, *Carbohydr. Res.*, **1992**, 228, pp. 307-314, and *Angew. Chem., Int. Ed. Engl.*, 1991, 30, pp. 78-80).

- or from C-6 halogenation of the 6-*O*-tosyl compound (in quantitative yield), which is obtained from cyclomaltoheptaose

with a yield of 50% following the teaching of international application WO 99/61483 by DEFAYE et al.

As the process is different, the process of preparation of this specific compound is not excluded from the process claims.

Moreover, considering the four groups set forth in the Official Action, please note that the processes of Groups I and II are processes for preparation of compounds of group III and IV respectively. Compounds of formula (I) not comprising a biorecognition element (group III) are intermediates in the synthesis of compounds of formula (I) comprising a biorecognition element (group IV), so these two groups share a special technical feature.

That is, the four Groups relate to a single general inventive concept.

The applicant considers in particular that groups II (process) and IV (compounds with a biorecognition element) should be examined together because they relate to the same invention.

Additionally, it is noted that the Official Action has already applied the NAGATA et al. reference to all the claims of the present invention to formulate the election/restriction requirement. As a result, consideration and/or search has already been performed for all the claims of the present invention. There is therefore no serious burden to continue to consider and prosecute all of the embodiments of the present invention.

Rejoinder and early and favorable prosecution on the merits
is accordingly respectfully requested.

The Commissioner is hereby authorized in this, concurrent,
and future replies, to charge payment or credit any overpayment
to Deposit Account No. 25-0120 for any additional fees required
under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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